UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,526	02/18/2000	Stephane H. Maes	Y0999-178 (8728-306)	7963

7590   01/30/2004

Frank Chau, Esq.
F. Chau & Associates LLP
1900 Hempstead Turnpike
Suite 501
East Meadow, NY 11554

EXAMINER
HO, THE T

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 01/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>12 November 2003</u> .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-37</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-37</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6)☐ Other: .

DETAILED ACTION

1. This action is in response to the amendment filed 11/12/2003.

2. Claims 1-37 have been examined and are pending in the application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-15 and 19-37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hashimoto U.S Patent No. 6,119,147.

As to claim 1, Hashimoto teaches a system comprising a multi-modal

application (1A, Fig. 56) comprising at least a first and a second mode process (inputs

and outputs from the application programs, lines 23-25 column 41; speech synthesis

unit operated as an independent process, lines 37-38 column 42); a multi-modal shell

(11, Fig. 56) for managing and synchronizing information exchanges between the

processes (controls by exchanging the messages transmitted from the speech unit to

the application program, lines 38-41 column 10); the processes register their respective

active commands and corresponding actions (register the recognition vocabularies and

the appropriate actions that response to these vocabularies, line 48 column 10 to line 10

column 11) with the multi model shell (11, Fig. 56). Hashimoto does not explitcitly teach

an API. However, Hashimoto teaches that each application program includes a

message I/O unit (line 9-29 column 12) wherein all of the application program

interactions with the speech recognition system are handled by this message I/O unit.

Therefore one of ordinary skill in the art would conclude that this message I/O unit could

be used as an API since it provides the interface for each application program to

interact with the speech recognition system.

As to claim 2, Hashimoto as modified further teaches a registry having a

registration table (program management table, line 58 column 10), managed by the

multi-modal shell (11, Fig. 56), that comprises a list of each of the registered commands

and corresponding synchronized actions (the recognition vocabularies and the

appropriate actions that response to these vocabularies, line 48 column 10 to line 10

column 11) that results in both the first and second mode processes upon execution of

a registered command (once the speech input "Finish" is transmitted, both of the

application program can be finished by this single speech input, lines 5-8 column 27) by

one of the first and second mode processes (inputs and outputs from the application

programs, lines 23-25 column 41).

As to claim 3, Hashimoto as modified further teaches a first mono-mode

application (speech synthesis unit, line 37 column 42) and a second mono-mode

application (application program, lines 41-42 column 42), wherein the multi-modal shell

(11, Fig. 56) manages and synchronizes information exchanges (message exchanges

using the process communication, lines 39-40 column 42) between the first (speech

synthesis unit, line 37 column 42) and second mono-mode applications (application

program, lines 41-42 column 42).

As to claim 4, Hashimoto as modified does not teach devices having user

interface modalities. However, Hashimoto teaches (lines 51-55 column 12) the

message system can be implemented as a server and clients system wherein the

speech recognition unit can act as a server and the applications programs are clients.

Therefore one of ordinary skill in the art would conclude that the clients are the devices

with modalities wherein these devices can register their commands and corresponding

actions with the server.

As to claim 5, Hashimoto as modified further teaches the devices multi-modal

shell are distributed over a network (server and client system, lines 51-55 column 12),

and wherein the API is implemented using distributed APIs or protocols (byte stream

type protocol, lines 54-55 column 12).

As to claim 6, Hashimoto as modified further teaches a mechanism for

converting a mono-mode application to a multi modal application (application program 5

is interact with both speech input and keyboard input, Fig. 17).

As to claim 7, Hashimoto as modified further teaches the mono-mode

application is a GUI application (user interface of Fig. 18), the mechanism (11, Fig. 56)

provides speech enablement (controls by exchanging the messages transmitted from

the speech unit to the application program, lines 38-41 column 10) of the GUI

application (user interface of Fig. 18) by registering the active commands of the GUI

application and building a grammar for the registered commands to support the

commands in a speech modality (register the recognition vocabularies and the appropriate actions that response to these vocabularies, line 48 column 10 to line 10 column 11).

As to claim 8, Hashimoto as modified further teaches a mechanism for building a multi-modal application (application program 5 is interact with both speech input and keyboard input, Fig. 17).

As to claim 9, Hashimoto as modified further teaches the mechanism (11, Fig. 56) is used for directly programming the registry by building a registration table (program management table, line 58 column 10) having user-defined commands and corresponding actions (the recognition vocabularies and the appropriate actions that response to these vocabularies, line 48 column 10 to line 10 column 11) for each of the modalities of the multi-modal application (1A, Fig. 56).

As to claim 10, Hashimoto as modified further teaches that the system is implemented on personal computers, workstations...(lines 8-12 column 1). Hashimoto does not explicitly disclose an operating system. "Official Notice" is taken that both the concept and advantage of providing for an operating system is well known and expected in the art. It would have been obvious to include an operating system into the system of Hashimoto because it would provide the execution space for the system.

As to claim 11, Hashimoto as modified further teaches the system is distributed over a network (server and client system, lines 51-55 column 12).

As to claim 12, Hashimoto as modified further teaches the multi-modal application (1A, Fig. 56) is a multi-modal browser (a mail browser, Fig. 27), wherein the

first mode process renders a first modality (the user can command to open the mail by saying "yes", lines 54-60 column 25) and the second mode process renders a second modality (the mouse can click on "yes" to open the mail, lines 61-65 column 25).

As to claim 13, Hashimoto as modified further teaches the first modality is GUI (interface of Fig. 27) and the second modality is speech (the user can command to open the mail by saying "yes", lines 54-60 column 25).

As to claim 14, Hashimoto as modified further teaches the multi-modal shell (11, Fig. 56) processes a CML file (recognition result, line 16 column 25) to send modality specific presentation information (speech result from the speech recognition system, lines 14-17 column 25) in the CML file (recognition result, line 16 column 25) to the respective browsers (a mail browser, Fig. 27).

As to claim 15, Hashimoto as modified further teaches the CML file (recognition result, line 16 column 25) encapsulates the modality-specific presentation information (speech result from the speech recognition system, lines 14-17 column 25) in a single modality-independent representation (input speech, line 12 column 25).

As to claim 19, Hashimoto teaches receiving a command (speech input, line 14 column 41) in a first modality (speech recognition interface system, line 13 column 41); triggering an action (speech output, line 19 column 41) in the first modality (speech recognition interface system, line 13 column 41) and a corresponding action (the mail is opened when the user saying "yes", lines 54-60 column 25) in at least a second modality (application program, lines 41-42 column 42) based on the received command; updating application state associated with the second modality (update the program

management data in the program management according to an internal state of each

application program, lines 35-39 column 76). Hashimoto does not explitcitly teach

updating application state associated with the first modality. However, Hashimoto

teaches (lines 37-46 column 14) the speech recognition system also has its own internal

state; and when there is a change in this internal state, the application program will get

a message notifies about this change. Therefore one of ordinary skill in the art would

conclude that in a certain time, the internal state of the speech recognition system is

updated; therefore produces the state change.

As to claim 20, Hashimoto as modified further teaches registering active

commands associated with the modalities (the recognition vocabularies and the

appropriate actions that response to these vocabularies, line 48 column 10 to line 10

column 11); associating, with each registered command of the modalities, an action on

one modality and a corresponding action on the other modality (once the speech input

"Finish" is transmitted, both of the application program can be finished by this single

speech input, lines 5-8 column 27).

As to claim 21, Hashimoto as modified further teaches building a command to

action registration table (program management table, line 58 column 10) based on the

registered commands and actions (the recognition vocabularies and the appropriate

actions that response to these vocabularies, line 48 column 10 to line 10 column 11).

As to claim 22, Hashimoto as modified further teaches the registration table

(program management table, line 58 column 10) is built by a multi-modal shell (11, Fig.

56). Hashimoto does not explitcitly teach an API. However, Hashimoto teaches that

each application program includes a message I/O unit (line 9-29 column 12) wherein all of the application program interactions with the speech recognition system are handled by this message I/O unit. Therefore one of ordinary skill in the art would conclude that this message I/O unit could be used as an API since it provides the interface for each application program to interact with the speech recognition system.

As to claim 23, Hashimoto as modified further teaches looking up the received command (the recognition vocabulary lists, lines 59-60 column 10) in the registration table (program management table, line 58 column 10); and executing the actions associated with the received command on the first and second modalities (once the speech input "Finish" is transmitted, both of the application program can be finished by this single speech input, lines 5-8 column 27).

As to claim 24, Hashimoto as modified further teaches registering a callback handle for each of the registered commands to notify the first and second modalities of completion of the actions corresponding to the registered commands (after the dictionary production is completed, notifies this act to the data acquisition unit 8 by a message indicating the completion of the dictionary production, lines 3-5 column 33).

As to claim 25, Hashimoto as modified further teaches executing the callback handle associated with the received command to trigger callback actions on the modalities (after the dictionary production is completed, notifies this act to the data acquisition unit 8 by a message indicating the completion of the dictionary production, lines 3-5 column 33).

As to claim 26, Hashimoto as modified further teaches executing first thread associated with the received command ("Finish", line 6 column 27); triggering a corresponding second thread to initiate the corresponding action on the second modality (once the speech input "Finish" is transmitted, both of the application program can be finished by this single speech input, lines 5-8 column 27).

As to claim 27, Hashimoto as modified further teaches the threads are applets ("Yes" and "No" icons in Fig. 27).

As to claim 28, Hashimoto as modified further teaches the threads communicate via socket connections (server and client system (lines 51-55 column 12) with a mail browser, Fig. 27)).

As to claims 29-37, they are device claims of claims 19-21 and 23-28, respectively. Therefore, they are rejected for the same reasons as claims 19-21 and 23-28 above.

4. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Toomey U.S Patent No. 6,119,147.

As to claim 16, Hashimoto as modified does not explitcitly teach the file comprises a combination of declarative markup languages. Toomey teaches a multi-model document with a combination of declarative markup languages (text discussion, audio commands, graphics, and documents, lines 60-61 column 1). It would have been obvious to apply the teachings of Toomey to the system of Hashimoto because this

document will provide the user with the convenience of interacting with the system using the choice of texts or speech commands.

As to claim 17, Toomey further discloses a single file combining the declarative markup languages and synchronization elements to provide tight synchronization between the declarative markup languages (interactions are inserted into the multi-modal document at a point that is chronological in the meeting to create a synchronous meeting, lines 11-13 column 15).

As to claim 18, Toomey further discloses a separate file for each of the declarative markup languages (multiple tracks in the multi-modal document, lines 59-60 column 1).

Response to Arguments

5. Applicant's arguments filed have been fully considered but are moot in view of the new ground(s) rejection.

Applicant's arguments presented issues which required the Examiner to further view the previous rejection. The Examiner conducted a further search regarding the issues mentioned in Applicant's response. Therefore, all arguments regarding the cited references of the previous rejection are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to The Thanh Ho whose telephone number is 703-306-

5540. A voice mail service is also available for this number. The examiner can

normally be reached on Monday – Friday, 8:30 am – 5:00 pm.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-305-

3900.

Any response to this action should be mailed to:

Commissioner for Patents

P.O Box 1450

Alexandria, VA 22313-1450

Or fax to:

- AFTER-FINAL faxes must be signed and sent to (703) 746 – 7238

- OFFICAL faxes must be signed and sent to (703) 746 – 7239

- NON OFFICAL faxes should not be signed, please send to (703) 746 – 7240

TTH
January 23, 2004

MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100